

Listing of Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

- 5 1. (Currently Amended) A method for processing incoming data from a host system
and received by a storage controller ~~with~~ having a buffer controller coupled to a buffer memory,
comprising:
- 10 evaluating ~~incoming data~~ block length in real time for the incoming data that is re-
ceived by a first FIFO based memory in a first channel of the buffer controller size,
wherein a first channel controller of the buffer controller evaluates the data block
length using a data length counter and a bit value set up by storage controller
firmware in a first channel controller register allows the buffer controller to process
any MOD size data block ;
- 15 determining if the incoming data requires padding based on whether alignment of
data received by the buffer controller from the host system is different from align-
ment of data used by the buffer controller to process data, which is sent to the stor-
age device; and
- padding incoming data such that the incoming data can be processed by the buffer
controller.
- 20 2. (Currently Amended) The method of Claim 1, wherein the incoming data after being
padded ~~may be~~ is stored in the buffer memory before being transferred to the storage
device.

3. (Original) The method of Claim 1, wherein the buffer controller pads incoming data in real time before being stored in the buffer memory.

4. (Currently Amended) A method for ~~reading~~ sending data from a storage device to a host system via a buffer memory that is operationally coupled to a storage controller through, which is regulated by a buffer controller, comprising:

determining if any pads needs to be removed from the data before the data is read from the buffer memory; wherein a first channel controller of the buffer controller evaluates the data in real time and if data alignment is different from a data alignment used by an interface that sends the data to the host system, then the first channel controller determines that padding needs to be removed from the data; and a bit value set up by storage controller firmware in a first channel controller register allows the

buffer controller to process any MOD size data block;

removing pads from the data read from the buffer memory; and
continuing to determine if any pad needs to be removed and removing the pad if data alignment of the data stored in the buffer memory is different from the data alignment used by the interface, until a last block of data has been read from the buffer memory.

5. (Currently Amended) The method of Claim 4, wherein the pads are removed so that data can be processed using a SCSI storage controller interface.

6. (Currently Amended) A storage controller operationally coupled between a storage device and a host system for transferring data between the storage device and the host system, comprising:

a buffer controller that can be set in a mode to ~~receive~~ process any MOD size data received from the host system via an interface and includes a first channel with a FIFO

based memory for receiving incoming data from the host system via ~~a first~~ the interface,
wherein a bit value set up by storage controller firmware in a first channel controller reg-
ister allows the buffer controller to process any MOD size data block; and a first channel
controller evaluates incoming data alignment in real time by using a data length counter,
5 and if alignment of the incoming data is different from a data alignment that is used by
the buffer controller to process the data, then the incoming data is padded so that it can be
stored in a buffer memory.

7. (Currently Amended) The storage controller of Claim 6, wherein for data that is to
be sent from the storage device to the host system, the first channel controller of the
10 buffer controller evaluates the data and if data alignment is different from a data
alignment used by the interface that sends the data to the host system, then the first
channel controller determines that padding needs to be removed from the data; and
based on that padding is removed from the data before it is read from the buffer mem-
ory and sent to the interface. ~~padding may also be removed from data that is read from~~
15 ~~the buffer memory.~~

8. (Cancelled)

9. (Currently Amended) A system for transferring data between a storage device and a
host system ~~having a storage controller operationally coupled to storage device,~~
comprising:

20 a storage controller that is coupled between the storage device and the host system
includes a buffer controller that can be set in a mode to ~~reeive~~ process any MOD size
data received from the host system and/or the storage device; and wherein a bit value set
up by storage controller firmware in a first channel controller register allows the buffer

controller to process any MOD size data block and the buffer controller includes a first
channel with a FIFO based memory for receiving incoming data via a the first interface
from the host system, wherein a first channel controller evaluates incoming data align-
ment in real time and if the incoming data alignment is different from a data alignment
5 that is used by the buffer controller to process the data, then the incoming data is padded
so that it can be stored in a buffer memory; and for data that is to be sent from the storage
device to the host system, the first channel controller of the buffer controller evaluates the
data from the storage device and if data alignment is different from a data alignment used
by the interface that sends the data to the host system, then the first channel controller de-
10 termines that padding needs to be removed from the data from the storage device; and
based on that padding is removed from the data before it is read from the buffer memory
and sent to the interface.

10. (Currently Amended) The system storage controller of Claim 9, wherein the inter-
face is a SCSI interface padding may also be removed from data that is read from the
15 buffer memory.

11. (Cancelled)

12. (New) The storage controller of Claim 6, wherein the interface is a SCSI interface.